

10 April 1957

MEMORANDUM FOR: THE RECORD

SUBJECT : Conference Regarding Silencing Robot Camera;
 Features K-100, 16mm Motion Picture Camera;
 [redacted] 35mm Time Lapse Camera.

25X1

1. Time and Place: April 10th, 1957 - Office APD.

2. Attendance:

[redacted]	[redacted]
	APD
	APD
	APD
	APD
	PSD

25X1

3. Purpose: To correlate tasks and problems now in progress
by the manufacturer, and exchange ideas between APD, PSD.

25X1

4. Discussion: [redacted] arrived from [redacted] and re-
 ported to APD, on or about noon. He brought with him one K-100
 camera. The unit is about 100% complete, except for a few minor
 additions. The camera will be on display by APD during the week
 15th - 19th April 1957. It will be returned to [redacted] after
 April 22nd 1957, for completion.

25X1

The features of this camera, equipped with an automatic
 iris diaphragm were explained by [redacted] to the group.

25X1

He pointed out that the automatic iris was synchronized to
 operate only when the camera was running at 16; 24; 32; 48; or 64
 frames per second.

The automatic iris can be indexed for film speeds 50; 100;
 200; and 400 A.S.A.

During the present meeting [redacted] indicated that the
 K-100 could not be used for making one picture at a time. Commonly
 referred to as "Stop Motion." This is obvious because Eastman did
 not design it with this feature. It requires at least one second
 to get the camera in motion, and also for the automatic iris to
 properly compensate for existing light level. During the one second
 period, at least forty pictures are made.

25X1

008632
21 July 1957 057447

27	21 July 1957	057447
056	520	CB
CLASS S	PAGES 3	REV C
22	NEXT REV 2010	057447

MEMORANDUM FOR: THE RECORD

SUBJECT : Conference regarding Silencing Robot Camera;
Features K-100, 16mm Motion Picture Camera;
[redacted] Camera, 35mm Time Lapse Camera

25X1

The camera, with the automatic iris, met the requirements intended and everyone seemed satisfied.

The next item discussed was the 35mm time lapse camera. [redacted] brought with him an artist's sketch which outlined the various features for which the camera was designed. These features were previously outlined to [redacted] and at that time he suggested adding another series of time lapse sequences to include minutes. This additional requirement was feasible to meet before the camera was sent to the shop for fabrication. It was generally agreed between the group, that this camera had all the features necessary and we would not delay or complicate the unit by adding anymore suggested ideas.

25X1

The next item under discussion is the modified Leica [redacted] Camera. Again [redacted] used an artist's drawing showing how the camera [redacted] and how it is used.

25X1

25X1

25X1

Several commercial and good engineered cameras were obtained and analyzed to determine which one could best be modified. It was determined after study, that the Leica offered the most practical solution, for several reasons.

1. The shutter could be silenced.
2. The lens could be relocated by using a prism arrangement.
3. The camera is reliable and readily available.
4. The thin width of camera body reduces the problem [redacted]
5. The cost of modification is low compared to designing and building a new camera to do the same thing.

25X1

It was agreed that the Leica could be developed and used for operational requirements.

MEMORANDUM FOR: THE RECORD
 SUBJECT : Conference Regarding Silencing Robot Camera;
 Features K-100, 16mm Motion Picture Camera;
 [redacted] 35mm Time Lapse Camera

25X1

The next item discussed in theory was quieting the shutter and gear mechanism in the Robot Camera.

[redacted] did not seem too concerned about the problem of quieting the shutter.

25X1

He pointed out several ways shutter noise can be reduced to a minimum. The major problem, however, is to eliminate the whine of high speed gears.

When these gears are suddenly released, they are driven by a strong and stiff conical spring. This spring rotates a train of small gears, [redacted] high speed.

AT

The camera is designed to make single pictures rapidly by pushing a button. It is possible to make from five to six shots a second.

[redacted] said that by eliminating the gears incorporated for 1/1000th of a second, and by reducing the number of pictures to possibly three a second, most of the whine would eliminate itself. Whatever audible whine remaining, could further be reduced by a dampening governor, and floating the gear train on the camera today. The possibility of replacing the conical spring, which varies in tension, and using the "NEGATOR" spring which applies a constant torque may also help overcome whine.

25X1

It was agreed that every effort be exploited to eliminate all noise, if possible, on the Robot Camera.

The conference then came to a close. We thanked [redacted] for coming to Washington to discuss these problems.

25X1

[redacted]

25X1

Distribution:

1-AH-31
 1-AH-33
 1-P-167D
 1-P-125D
 1-Chromo

TSS/APD/[redacted]

-3- [redacted]

25X1